2103899 **GENERAL STORAGE CODE GREEN**

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Section 1

Identification

"Cutting edge science for the classroom" by Aldon Corporation "Cutting edge science for the classroom"

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

Product PHOSPHOROUS EXTRACTION	
Synonyms Plant nutrient extractor	
Section 2 Hazards identification	
Signal word: WARNING Pictograms: No symbol required Target organs: None known GHS Classification: Eye irritation (Category 2B) GHS Label information: Hazard statement: H320: Causes eye irritation.	Precautionary statement: P264: Wash hands thoroughly after handling. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Compositio	n / information on ingredients			
Chemical Name	CAS #	%	EINECS	
Water Sodium acetate, trihydrate Acetic acid	7732-18-5 6131-90-4 64-19-7	87% 10% 3%	231-791-2 204-823-8 (anhydrous) 200-580-7	
Section 4 First aid me	asures			

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This chemical reacts violently with strong oxidizers, generating a fire and explosion hazard. Reacts violently with strong bases, strong acids and many other compounds.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Form 06/2015

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Limits.	Acetic acid	TWA: 25 mg/m ³ STEL: 37 mg/m ³	TWA: 25 mg/m ³	TWA: 25 mg/m ³ STEL: 37 mg/m ³			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approved respirator.							
Section 9	Physical and chemical pr	operties					
	dor. tta not available. ole. Approximately 0°C (32°F) (water) kimately 100°C (212°F) (water)	Flammability (Explosion limi Vapor pressur Vapor density Relative density	ate (Water = 1): <1 solid/gas): Data not a tts: Lower / Upper: D e (mm Hg): 14 (water (Air = 1): 0.7 (water) (Specific gravity): Appr : Complete in water.	ata not available)	Auto-ignitio Decomposi Viscosity: Molecular f		: Data not available re: Data not available. ole. e
Section 10	Stability and reactivity						
Chemical stability:			us polymerization: V ion.	Vill not occur.			
reaction with acetald	ehyde and acetic anhydride. Ig	nites on contact w	vith potassium-tert-boto	xide.			o some metals. Potentially violent
	carbon products. Carbon mo	loxide, nydrogen		iul gases of vapors		s and/or other c	ompounds of suitar and sociam.
Section 11	Toxicological information						
Serious eye damag Respiratory or skin Germ cell mutageni Carcinogenity: Dat NTP: No componen IARC: No componen OSHA: No componen Ca Prop 65: This pro Reproductive toxici STOT-single expose STOT-repeated exp Aspiration hazard: Potential health effe Inhalation: May be ha Skin: Contact with si Eyes: Contact with si Signs and symptom Additional informat	of this product present at levels t of this product present at level at of this product present at level duct does not contain any chen ty: Data not available ure: Data not available Data not available osure: Data not available osure: Data not available csts: armful if inhaled. armful if swallowed. kin causes pain and redness. ayes may cause redness and pais of exposure: See Potential ion: RTECS #: AF1225000 [A	re irritant. [Acetic ble s greater than or e s greater than or ls greater than or licals known to th in. health effects abo	acid, glacial] equal to 0.1% is identifi equal to 0.1% is identifi equal to 0.1% is ident e State of California to	ied as probable, po ified as a carcinoge cause cancer or re	ossible or confirr en or potential ca productive toxic	ned human carc arcinogen by OS iity.	0
Section 12	Ecological information						
Toxicity to daphnia Toxicity to algae: Eu Persistence and de Mobility in soil: No Other adverse effec Section 13	ts: An environmental hazard ca Disposal considerations	es: Daphnia mag 720 mg/L [Acetic ble Bioaccumu PBT and vi annot be excluded	na (Crustacea), EC50 c acid, glacial] Ilative potential: Not PvB assessment: No d in the event of unprof	= 95 mg/L/24 hours expected to bioacc data available essional handling c	umulate or disposal.		
	delines are intended for the different. Dispose of in acc						
Section 14	Transport information				contract with		
UN/NA number: Hazard class: Not Exceptions: Not	Not applicable Ship ot applicable Pack applicable 2020	ping name: N ing group: N ERG Guide #	0	Reportable Qu	antity: No	Ma	rine pollutant: No
Section 15	Regulatory information						
A chemical is considered Compone	to be listed if the CAS number for	the anhydrous form	is on the Inventory list. CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Acetic acid, glacial Sodium acetate		Listed	5,000 lbs (2270 kg) Not listed	D001, D002 Not listed	Listed Listed	Not listed Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Section 16	Other information						· · · · · · · · · · · · · · · · · · ·
dent determinations of s	uitability and completeness of infor ncy for Research on Cancer, OSHA	nation from all sour	ces to assure proper use	of these materials and ion, STOT: Specific Ta	I the safety and he arget Organ Toxicit	ealth of employees ty, SE: Single Expo	ered by them and must make indepen- NTP: National Toxicology Program, posure, RE: Repeated Exposure, Program September 16, 2022

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Section 1

Identification

"Cutting edge science for the classroom" by Aldon Corporation "Cutting edge science for the classroom"

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only.

	Not for drug, food or household use.
Product NUTRIENT SOLUTION	
Synonyms Nitrate Reagent #1	
Section 2 Hazards identification	
Signal word: WARNING Pictograms: GHS07 Target organs: None Image: Signal word: WARNING Pictograms: Supervised of the system GHS classification: Acute toxicity, oral (Category 5) Skin irritation (Category 3) Eye irritation (Category 2B) GHS Label information: Hazard statement(s): H303: May be harmful if swallowed. H316: Causes mild skin irritation. H320: Causes eye irritation. H320: Causes eye irritation.	Precautionary statement(s): P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P332+P313: If skin irritation occurs: Get medical attention. P361+P364: Take off immediately all contaminated clothing and wash it before reuse P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention. P312: Call a POISON CENTER or doctor if you feel unwell.

Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / inform	ation on ingredients			
Chemical Name	CAS #	%	EINECS	
Water	7732-18-5	99.85%	231-791-2	
Calcium nitrate, tetrahydrate	13477-34-4	0.08%	233-332-1	
Potassium nitrate	7757-79-1	0.02%	231-818-8	
Magnesium sulfate	10034-99-8	0.02%	231-298-2 (anhydrous)	
Potassium phosphate, dibasic	7758-11-4	0.02%	231-834-5	
Ferric phosphate	10045-86-0	0.01%	233-149-7	

Section 4 First aid measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use any media suitable for extinguishing supporting fire.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection						
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)			
Exposure Linits.	Calcium nitrate	None established	None established	None established			

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator

Boiling point: Approx Flash point: Data n	Physical and chemical liquid.	al properties					
Odor: No odor. Odor threshold: Da pH: Data not availab Melting / Freezing point: Boiling point: Appro: Flash point: Data n	liquid.						
	ole. : Approximately 0°C (32°F) (wat ximately 100°C (212°F) (wate	Flammability Explosion lim Vapor pressu Vapor density Relative density	ate (Water = 1): <1 (solid/gas): Data not a its: Lower / Upper: D re (mm Hg): 14 (water r (Air = 1): 0.7 (water) r (Specific gravity): Appr : Complete in water.	Data not available r)	Auto-ignitio Decomposit Viscosity: [Molecular fo	•	e: Data not available Ire: Data not available. ble. re
Section 10	Stability and reactivit	у					
Chemical stability: Conditions to avoid	Stable : Excessive temperatures		ous polymerization: \	Will not occur.			
ncompatible mater	ials: None known at these	e dilutions.					
Hazardous decomp	osition products: None I	nown at these dilutior	IS.				
Section 11	Toxicological informa I-rat LD50: 3,900 mg/kg [C						
IARC: No componen OSHA: No componen Ca Prop 65: This pro Reproductive toxici STOT-single exposi STOT-repeated expo Aspiration hazard: Potential health effe Inhalation: May be ha Ingestion: May be has Skin: Contact with sl	e cts: armful if inhaled.	levels greater than or t levels greater than or	equal to 0.1% is identi r equal to 0.1% is iden	fied as probable, pos tified as a carcinoger	sible or confirm or potential ca	ed human caro rcinogen by OS	
Signs and symptom not available. Exerci	se appropriate procedures	to minimize potential	hazards.		erties have not	been thorough	ly investigated. Specific data
Signs and symptom not available. Exerci Additional informat Section 12	se appropriate procedures ion: RTECS #: EW30000 Ecological informatio	to minimize potential 000 [Calcium nitrate],	hazards.		erties have not	been thorough	ly investigated. Specific data
Signs and symptom not available. Exerci Additional informat Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to algae: No Persistence and deg Mobility in soil: No Other adverse effec Section 13 These disposal gui regulations may be	se appropriate procedures ion: RTECS #: EW30000 Ecological informatio data available and other aquatic inverte o data available gradability: No data avail data available ts: An environmental haza Disposal consideratii delines are intended for o different. Dispose of in	to minimize potential 000 [Calcium nitrate], n abbrates: No data avai able Bioaccum PBT and v ard cannot be exclude ons the disposal of cata accordance with al	hazards. TT3700000 [Potassium able ulative potential: No PvB assessment: No d in the event of unpro log-size quantities o	a nitrate] data available o data available fessional handling or nly. Federal regula	disposal. ations may app	bly to empty c	container. State and/or loca
Signs and symptom not available. Exerci Additional informat Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to algae: No Persistence and deg Mobility in soil: No Other adverse effec Section 13 These disposal gui	se appropriate procedures ion: RTECS #: EW30000 Ecological informatio data available and other aquatic inverte o data available gradability: No data avail data available ts: An environmental haza Disposal consideration delines are intended for e different. Dispose of in Transport information	to minimize potential 000 [Calcium nitrate], n ebrates: No data avai able Bioaccum PBT and v ard cannot be exclude ons the disposal of cata accordance with al n	hazards. IT3700000 [Potassium able ulative potential: No PvB assessment: No d in the event of unpro- log-size quantities o local, state and fede	a nitrate] data available o data available fessional handling or nly. Federal regula	disposal. ations may app	bly to empty c	container. State and/or loca
Signs and symptom not available. Exerci Additional informat Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to algae: No Persistence and deg Mobility in soil: No Other adverse effec Section 13 These disposal gui regulations may be	se appropriate procedures ion: RTECS #: EW30000 Ecological informatio data available and other aquatic inverte o data available gradability: No data avail data available ts: An environmental haza Disposal consideration delines are intended for e different. Dispose of in Transport information Not applicable	to minimize potential 000 [Calcium nitrate], n abbrates: No data avai able Bioaccum PBT and v ard cannot be exclude ons the disposal of cata accordance with al	hazards. IT3700000 [Potassium able ulative potential: No PvB assessment: No d in the event of unpro- log-size quantities o local, state and feder lot Regulated ot applicable	a nitrate] data available o data available fessional handling or nly. Federal regula	disposal. ations may app contract with a	bly to empty o	container. State and/or loca
Signs and symptom not available. Exerci Additional informat Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to dapae: No Persistence and deg Mobility in soil: No Other adverse effec Section 13 These disposal gui regulations may be Section 14 UN/NA number: Hazard class: Not Section 15	se appropriate procedures ion: RTECS #: EW30000 Ecological informatio data available and other aquatic inverte o data available gradability: No data avail data available ts: An environmental haza Disposal consideration delines are intended for e different. Dispose of in Transport informatio Not applicable t applicable applicable Regulatory informatio	to minimize potential 000 [Calcium nitrate], n ebrates: No data avai able Bioaccum PBT and v ard cannot be exclude ons the disposal of cata accordance with al n Shipping name: N Packing group: N 2020 ERG Guide # on	hazards. IT3700000 [Potassium able ulative potential: No PvB assessment: No d in the event of unpro- log-size quantities o local, state and feder lot Regulated ot applicable Not applicable	a nitrate] data available data available fessional handling or nly. Federal regula eral regulations or	disposal. ations may app contract with a	bly to empty o	ontainer. State and/or loca mical disposal agency.
Signs and symptom not available. Exerci Additional informat Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to dapae: No Persistence and deg Mobility in soil: No Other adverse effec Section 13 These disposal gui regulations may be Section 14 UN/NA number: Hazard class: No Exceptions: Not Section 15 A chemical is considered	se appropriate procedures ion: RTECS #: EW30000 Ecological informatio data available and other aquatic inverte o data available gradability: No data avail data available ts: An environmental haza Disposal consideration delines are intended for o different. Dispose of in Transport informatio Not applicable t applicable applicable d to be listed if the CAS number	to minimize potential 000 [Calcium nitrate], n ebrates: No data avai able Bioaccum PBT and v ard cannot be exclude ons the disposal of cata accordance with al n Shipping name: N Packing group: N 2020 ERG Guide # on	hazards. IT3700000 [Potassium able ulative potential: No PvB assessment: No d in the event of unpro- log-size quantities o local, state and feder lot Regulated ot applicable Not applicable is on the Inventory list.	data available data available fessional handling or nly. Federal regula eral regulations or Reportable Q	disposal. ations may app contract with a uantity: No	bly to empty o licensed che	ontainer. State and/or loca mical disposal agency. arine pollutant: No
Signs and symptom not available. Exerci Additional informat Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to dapae: No Persistence and deg Mobility in soil: No Other adverse effec Section 13 These disposal gui regulations may be Section 14 UN/NA number: Hazard class: Not Section 15	se appropriate procedures ion: RTECS #: EW30000 Ecological informatio data available and other aquatic inverte o data available gradability: No data avail data available ts: An environmental haze Disposal consideration delines are intended for o different. Dispose of in Transport informatio Not applicable t applicable applicable d to be listed if the CAS number of the common sector of the common the common sector of the common and the common sector of the common term of the common sector of the common of the common sector of the common sector of the common sector of the common sector of the common sector of the common sector of the common sector of the common sector of the common sector of the common sector of the common sector of the common sector of the common sector of the	to minimize potential 000 [Calcium nitrate], n ebrates: No data avai able Bioaccum PBT and v ard cannot be exclude ons the disposal of cata accordance with al n Shipping name: N Packing group: N 2020 ERG Guide # on	hazards. IT3700000 [Potassium able ulative potential: No PvB assessment: No d in the event of unpro- log-size quantities o local, state and feder lot Regulated ot applicable Not applicable	a nitrate] data available data available fessional handling or nly. Federal regula eral regulations or	disposal. ations may app contract with a	bly to empty o	ontainer. State and/or loca mical disposal agency.

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Section 1

Identification

"Cutting edge science for the classroom" by Aldon Corporation "Cutting edge science for the classroom"

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

Product Synonyms

NITRATE REAGENT Nitrate Reagent #2

Section 2 Hazards identification

Signal word: WARNING Pictograms: GHS09 Target organs: None known



GHS Classification: Aquatic acute (Category 1) Aquatic chronic (Category 1)

GHS Label information: Hazard statement(s): H410: Very toxic to aquatic life with long lasting effects.

Precautionary statement(s):

P273: Avoid release to the environment. P391: Collect spillage. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Supplemental information:

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Combustible dust Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information on in	ngredients			
Chemical Name		CAS #	%	EINECS	
Barium sulfate Sucrose Zinc powder Magnesium sulfate		7727-43-7 57-50-1 7440-66-6 7487-88-9	67% 30% 1.5% 1.5%	231-784-4 200-334-9 231-175-3 231-298-2	

Section 4 First aid measures

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED AS FUME. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: MAY CAUSE MECHANICAL IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower evelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY CAUSE DERMATITIS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use triclass, dry chemical fire extinguisher. Do NOT use water on fire where molten metal is present.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Small chips, turnings, and dust with ignite readily. Dust cloud may be explosive.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Section 7	Handling and	storage			Page E2 of E2
Read label on contain	or boforo using	Do not wear contact lenses when working with chemicals	Keen container tightly closed	Keen out of reach of children	Llso with

ct lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with ng adequate ventilation. Wash thoroughly after handling.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale fumes from molten metals. Wash thoroughly after handling. Remove and wash clothing before reuse.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits.	Barium sulfate	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust	TWA: 10 mg/m ³ total dust		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9 Appearance: Solid Odor: No odor.		nronerties				
	Physical and chemical		anliachta	Deutitien	efficient: Data	nat available
Odor threshold: D pH: Data not availa	ata not available. ble. int: Data not available. a not available.	Evaporation rate (=1): Not a Flammability (solid/gas): Not a Explosion limits: Lower / Uppo Vapor pressure (mm Hg): Data Vapor density (Air = 1): Data n Relative density (Specific grav Solubility(ies): Partially soluble	applicable er: Not applicable not available ot available ity): Data not available.	Auto-ignitic Decomposi Viscosity: Molecular f	on temperature	: Not applicable Ire: Data not available. ble. e
Section 10	Stability and reactivity					
Chemical stability: Conditions to avoi		Hazardous polymerization Hazardous polymerization Hydrogen may evolve when in contact				
Incompatibilities w	vith other materials: Strong	acids, halogens, acids, alkalies and wa	ater.			
Hazardous decom	oosition products: Zinc oxic	les and zinc fumes. Reacts with water	r, acids or alkalies to gene	rate hydrogen	gas.	
Section 11	Toxicological informati	ion				
Germ cell mutager Carcinogenity: Da NTP: No componen IARC: No componen OSHA: No compone Ca Prop 65: This pr Reproductive toxic STOT-single expos STOT-repeated exp Aspiration hazard: Potential health eff Inhalation: Inhalatio Ingestion: May be t Skin: May cause de Eyes: Contact with	to f this product present at levent of this product present at loduct does not contain any checker. Data not available sure: Data not available Data not available Data not available fects: not dust or fume may cause in armful if swallowed. ermatitis.	vels greater than or equal to 0.1% is id evels greater than or equal to 0.1% is in levels greater than or equal to 0.1% is nemicals known to the State of Californ rritation to eyes, nose, throat, and caus irritation. ng of alloy can produce metal fumes a	dentified as probable, pos identified as a carcinogen nia to cause cancer or rep e a metallic taste in the mo	sible or confirm or potential ca roductive toxic	ned human card arcinogen by OS ity. se metal fume f	SHA.
• • •						e mouth, eye, and nose irritatior
Additional informa Section 12	Ecological information					e mouth, eye, and nose irritatior
Additional informa Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to algae: N Persistence and de Mobility in soil: No Other adverse effe	o data available a and other aquatic inverteb lo data available egradability: No data availab o data available cts: An environmental hazar	orates: No data available ble Bioaccumulative potential: PBT and vPvB assessment d cannot be excluded in the event of u	: No data available	disposal.		e mouth, eye, and nose irritation
Additional informa Section 12 Toxicity to fish: Not Toxicity to daphnia Toxicity to algae: Not Persistence and de Mobility in soil: Not Other adverse effe Section 13	o data available a and other aquatic inverteb lo data available egradability: No data availab o data available cts: An environmental hazar Disposal consideration	orates: No data available ble Bioaccumulative potential: PBT and vPvB assessment d cannot be excluded in the event of u ns	: No data available nprofessional handling or			
Additional informa Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to algae: No Persistence and de Mobility in soil: No Other adverse effe Section 13 These disposal gur regulations may b	o data available a and other aquatic inverteb lo data available egradability: No data available o data available cts: An environmental hazar Disposal consideration uidelines are intended for th e different. Dispose of in a	brates: No data available ble Bioaccumulative potential: PBT and vPvB assessment d cannot be excluded in the event of u ns ne disposal of catalog-size quantiti accordance with all local, state and	: No data available nprofessional handling or es only. Federal regula	tions may ap		container. State and/or local
Additional informa Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to algae: N Persistence and do Mobility in soil: No Other adverse effe Section 13 These disposal gur regulations may b Section 14	o data available a and other aquatic inverteb lo data available egradability: No data availab data available cts: An environmental hazar Disposal consideration uidelines are intended for th e different. Dispose of in a Transport information	brates: No data available Bioaccumulative potential: PBT and vPvB assessment d cannot be excluded in the event of u ns he disposal of catalog-size quantitia accordance with all local, state and	: No data available nprofessional handling or es only. Federal regula	tions may ap		container. State and/or local
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Additional informa Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to adaptina Toxicity to adgae: N Persistence and de Mobility in soil: No Other adverse effe Section 13 These disposal gur regulations may b Section 14 UN/NA number: Hazard class: N	o data available a and other aquatic inverteb lo data available egradability: No data availab o data available cts: An environmental hazar Disposal consideration uidelines are intended for the e different. Dispose of in a Transport information Not applicable SI lot applicable Pa	brates: No data available Bioaccumulative potential: PBT and vPvB assessment d cannot be excluded in the event of u ns he disposal of catalog-size quantiti accordance with all local, state and hipping name: Not Regulated acking group: Not applicable	: No data available nprofessional handling or es only. Federal regula	tions may ap contract with	a licensed che	container. State and/or local
Additional informa Section 12 Toxicity to fish: Not Toxicity to daphnia Toxicity to algae: N Persistence and de Mobility in soil: Not Other adverse effe Section 13 These disposal guregulations may b Section 14 UN/NA number: Hazard class: Not Exceptions: Not	o data available a and other aquatic inverteb to data available egradability: No data availab o data available cts: An environmental hazar Disposal consideration uidelines are intended for the e different. Dispose of in a Transport information Not applicable Si lot applicable Pa ot applicable 20	prates: No data available ble Bioaccumulative potential: PBT and vPvB assessment d cannot be excluded in the event of u ns ne disposal of catalog-size quantitiaccordance with all local, state and hipping name: Not Regulated acking group: Not applicable 020 ERG Guide # Not applicable	: No data available nprofessional handling or es only. Federal regula federal regulations or c	tions may ap contract with	a licensed che	container. State and/or local mical disposal agency.
Additional informa Section 12 Toxicity to fish: No Toxicity to daphnia Toxicity to algae: N Persistence and de Mobility in soil: No Other adverse effe Section 13 These disposal guregulations may b Section 14 UN/NA number: Hazard class: No Exceptions: No Section 15	o data available a and other aquatic inverteb lo data available egradability: No data availab cts: An environmental hazar Disposal consideration lidelines are intended for th e different. Dispose of in a Transport information Not applicable SI lot applicable Pa ot applicable 20 Regulatory information	brates: No data available Bioaccumulative potential: PBT and vPvB assessment d cannot be excluded in the event of u ns he disposal of catalog-size quantitia accordance with all local, state and hipping name: Not Regulated acking group: Not applicable 020 ERG Guide # Not applicable	: No data available nprofessional handling or es only. Federal regula federal regulations or o Reportable Qua t	tions may ap contract with	a licensed che	container. State and/or local mical disposal agency.
Additional informa Section 12 Toxicity to fish: No Toxicity to daphnie Toxicity to algae: N Persistence and de Mobility in soil: No Other adverse effe Section 13 These disposal guregulations may b Section 14 UN/NA number: Hazard class: No Exceptions: No Section 15	o data available a and other aquatic inverteb lo data available egradability: No data availab cts: An environmental hazar Disposal consideration lidelines are intended for th e different. Dispose of in a Transport information Not applicable SI lot applicable Pa ot applicable 20 Regulatory information ed to be listed if the CAS number	prates: No data available ble Bioaccumulative potential: PBT and vPvB assessment d cannot be excluded in the event of u ns ne disposal of catalog-size quantitiaccordance with all local, state and hipping name: Not Regulated acking group: Not applicable 020 ERG Guide # Not applicable	: No data available nprofessional handling or es only. Federal regula federal regulations or o Reportable Qua t ist.	tions may ap contract with	a licensed che	container. State and/or local mical disposal agency.

on only as a dent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015

S

SAFETY DATA SHEET

Page E1 of E2

ection 1	Identification

"Cutting edge science for the classroom" by Aldon Corporation "Cutting edge science for the classroom"

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

Product TIN(II) CHLORIDE, DIHYDRATE	
Synonyms Phosphorus Reagent #1	
Section 2 Hazards identification	
Section 2 Hazards identification Signal word: DANGER Pictograms: GHS05 / GHS07 / GHS08 / GHS09 Target organs: Liver, Kidneys, Brain	Precautionary statement: P203: Obtain, read and follow all safety instructions before use. P260: Do not breathe dust. P264: Wash hands thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P272: Contaminated work clothing should not be allowed out of the workplace. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P303+P351+P353: IF ON SKIN (or hair): Take off immediately all contaminated
Reproductive toxicity (Category 2) Reproductive toxicity (Category 2) STOT-SE (Category 3) STOT-RE (Category 2) Aquatic acute (Category 1) Aquatic chronic (Category 1)	 clothing. Rinse skin with water/shower. P333+P317: If skin irritation or rash occurs: Get medical help. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P310: Immediately call a POISON CENTER or doctor. P362+P364 Take off contaminated clothing and wash it before reuse.
GHS Label information: Hazard statement: H314: Causes severe skin burns and eye damage. H317: May cause allergic skin reaction. H332: Harmful if inhaled. H335: May cause respiratory irritation. H341: Suspected of causing genetic defects. H361: Suspected of damaging fertility or the unborn child. H373: May cause damage to organs through repeated exposure. H412: Harmful to aquatic life with long lasting effects.	P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.
Hazards not otherwise classified: Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known	
Contraction 2 Composition / information on instructionts	

Section 3	Section 3 Composition / information on ingredients							
Chemical Name		CAS #	%	EINECS				
Stannous chloride, d	ihydrate	10025-69-1	98-100%	231-868-0 [anhydrous]				
Section 4	First aid measures	1		1				

INGESTION: HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES BURNS. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Do not use water. Use dry chemical.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Linnes.	Stannous chloride	2mg/m ³ TWA	2mg/m ³ TWA	2mg/m ³ TWA		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approved respirator.							
Section 9	Physical and chemical pr	operties					
Appearance: Solid. V Odor: No odor. Odor threshold: Dat pH: Data not availabl Melting / Freezing po Boiling point: Decor Flash point: Not flam	ta not available le bint: 38°C (100°F) mposes	Flammability (Explosion lim Vapor pressur Vapor density Relative densi	ate (=1): Not applic solid/gas): Data not its: Lower / Upper: N re (mm Hg): Data not (Air = 1): Negligible ty (Specific gravity): : 118 g/100 ml water (available lot applicable available 2.71	Auto-ignitic Decomposi Viscosity: Molecular f	•	: Data not available Ire: Data not available. ble.
Section 10	Stability and reactivity						
Chemical stability: Conditions to avoid	Stable : Hygroscopic. Absorbs oxyge		ous polymerization: d forms insoluble oxyc		ssive temperatu	res.	
	als: Metals, strong oxidizing a cium carbide, hydrazine hydrat			cids, strong bases, l	bromine trifluori	de, ethylene oxi	de, potassium, hydrogen peroxide,
Hazardous decompo	osition products: Hydrogen c	hloride, chlorine,	tin/tin oxides.				
Section 11	Toxicological information						
Skin corrosion/irrita Serious eye damage Respiratory or skin Germ cell mutageni Carcinogenity: Data NTP: No component IARC: No component OSHA: No component Ca Prop 65: This prov Reproductive toxici STOT-single exposu STOT-repeated expo Aspiration hazard: Potential health effe Inhalation: Inhalation Ingestion: Ingestion Skin: Contact cause Eyes: Contact cause	Acute toxicity: Oral-rat LD50: 700mg/kg Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by IARC. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity. Reproductive toxicity: The substance or mixture is classified as toxic to reproduction, category 2. STOT-single exposure: Dat not available Aspiration hazard: Dat not available Potential health effects: Inhalation causes cough, sore throat, burning sensation, labored breathing, shortness of breath, wheezing. Ingestion: Ingestion causes addominal pain, burning sensation, shock or collapse. Skin: Contact cause						
Toxicity to fish: Bra Toxicity to daphnia a Toxicity to algae: An Persistence and deg Mobility in soil: No	Ecological information chydanio rerio (fish, fresh water and other aquatic invertebrat babaena flos-aquae (Algae), EC gradability: No data available data available ts: An environmental hazard ca	es: Daphnia mag 50 = >5 mg/L/4 h Bioaccum PBT and v	na (Crustacea), SG: 1 nours ulative potential: No PvB assessment: No	data available o data available	or disposal.		
Section 13	Disposal considerations						
regulations may be	different. Dispose of in acc	disposal of cata ordance with al	log-size quantities of local, state and fed	only. Federal regueral regueral regulations of	lations may ap r contract with	oply to empty o a licensed che	container. State and/or local emical disposal agency.
Section 14	Transport information	nomo. 0	aive colid saturation in		tannaus shi	ide)	
UN/NA number: Hazard class: 8 Exceptions: Limi	Packing g ited quantity equal to or less	roup: III	•	ble Quantity: No G Guide # 154		/	arine pollutant: No
Section 15	Regulatory information						
	to be listed if the CAS number for				DC:	NEC.	
Compone		TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Stannic chloride, anh	-	Listed	Not listed	Not listed	Not Listed	Not listed	This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
Section 16	Other information						
I no intermation contained	an noroin is turnished without warra	ntv ot anv kind En	nniovere chould use this i	ntormation only as a si	unnlement to othe	r intermation dath	ared by them and must make indepen-

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook. Form 06/2015

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Section 1

Identification

"Cutting edge science for the classroom" by Aldon Corporation "Cutting edge science for the classroom"

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.

Product	PHOSPHORUS REAGENT	
Synonyms	Phosphorus Reagent #2	
Section 2	Hazards identification	
Pictograms Target orga GHS Class Skin irritatic Eye irritatio GHS Label H315: Caus	ans: Respiratory system, Eyes, Skin, Teeth	Precautionary statement: P264: Wash hands thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection. P302+P352: IF ON SKIN: Wash with plenty of water and soap. P332+P313: If skin irritation occurs: Get medical attention. P362+P364: Take off contaminated clothing and wash it before reuse. P305+P331+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Removi contact lenses, if present and easy to do. Continue rinsing. P337+P313: If eye irritation persists: Get medical attention.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3	Composition / information of	on ingredients			
Chemical Name		CAS #	%	EINECS	
Water Acetic acid Sodium molybdate,	anhydrous	7732-18-5 64-19-7 7631-95-0	89.27% 8.5% 2.23%	231-791-2 200-580-7 231-551-7	
Section 4	First aid measures				

INGESTION: MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This chemical reacts violently with strong oxidizers, generating a fire and explosion hazard. Reacts violently with strong bases, strong acids and many other compounds.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits.	Acetic acid	TWA: 25 mg/m ³ STEL: 37 mg/m ³	TWA: 25 mg/m ³	TWA: 25 ma/m ³ STEL: 37 ma/m ³		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approved respirator.									
Section 9	Physical and chemical	properties							
Appearance: Clear, colorless liquid. Evaporation rate (Water = 1): <1									
Section 10	Stability and reactivity								
•	Chemical stability: Stable Hazardous polymerization: Will not occur. Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition. Figure 100 (100 (100 (100 (100 (100 (100 (100								
	als: Bases, strong oxidizers shyde and acetic anhydride.				xides, phospha	tes. Corrosive to	o some metals. Potentially violen		
Hazardous decomp	osition products: Carbon m	nonoxide, hydrogen	sulfide and other harm	ful gases or vapors	including oxide	s and/or other c	compounds of sulfur and sodium.		
Section 11	Toxicological information	on							
Skin corrosion/irrita Serious eye damage Respiratory or skin Germ cell mutageni Carcinogenity: Data NTP: No component IARC: No component OSHA: No component Ca Prop 65: This pro Reproductive toxici STOT-single expose STOT-repeated expo Aspiration hazard: Potential health effe Inhalation: May be ha Skin: Contact with sk Eyes: Contact with effe Signs and symptom Additional informati	Acute toxicity: Oral-rat LD50: 3,310 mg/kg ; Inhalation-rat LC50: 11.4 mg/L/4 hours ; Dermal-rabbit LD50: 1,060 mg/kg [Acetic acid, glacial] Skin corrosion/irritation: Skin-rabbit - Severe irritant. [Acetic acid, glacial] Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Ca Prop 65: This product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity. Reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available Aspiration hazard: Data not available Potential health effects: Inhalation: May be harmful if inhaled. Ingestion: May be harmful if swallowed. Skin: Contact with skin causes pain and redness. Eyees: Contact with skin causes pain and redness. Eyees: Contact with skin causes pain and redness. Eyees: Contact with eyes may cause redness and pain. Signs and symptoms of exposure: See Potential health effects above. Exercise appropriate procedures to minimize potential hazards.								
Section 12	Ecological information								
Toxicity to daphnia Toxicity to algae: Eu Persistence and deg Mobility in soil: No Other adverse effect Section 13	Toxicity to fish: Gambusia affinis (fish, fresh water), LC50 = 251 mg/L/24 hours [Acetic acid, glacial] Toxicity to daphnia and other aquatic invertebrates: Daphnia magna (Crustacea), EC50 = 95 mg/L/24 hours [Acetic acid, glacial] Toxicity to algae: Euglena gracilis (Algae), EC100 = 720 mg/L [Acetic acid, glacial] Persistence and degradability: Easily biodegradable Mobility in soil: No data available Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Section 13 Disposal considerations								
These disposal gui	delines are intended for th	e disposal of cata	log-size quantities or	nly. Federal regula	ations may ap	ply to empty c	container. State and/or local		
Section 14	different. Dispose of in a Transport information					a ilcenseu che	апісаї цізрозаї адепсу.		
UN/NA number:	•	ipping name: N	lot Regulated						
Hazard class: Not Exceptions: Not	ot applicable Pa	cking group: N 20 ERG Guide #	ot applicable	Reportable Qua	antity: No	Ma	arine pollutant: No		
Section 15	Regulatory information								
	t to be listed if the CAS number f	•							
Compone Acetic acid, glacial Sodium molybdate	nt	Listed Listed	CERLCA (RQ) 5,000 lbs (2270 kg) Not listed	RCRA code D001, D002 Not listed	DSL Listed Listed	NDSL Not listed Not listed	CA Prop 65 This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.		
Section 16	Other information						,		
The information containe dent determinations of s	ed herein is furnished without wa uitability and completeness of inf ncy for Research on Cancer, OSI	ormation from all sour	ces to assure proper use	of these materials and	the safety and he	ealth of employees	ered by them and must make indeper s. NTP: National Toxicology Program osure, RE: Repeated Exposure,		

Section 1	Identification	Page E1 of E
	DVATING SCIENCE ing edge science for the classroom" by Aldon Corporation 221 Rochester Street Avon, NY 14414-9409 (585) 228-6177	CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300 For laboratory and industrial use only. Not for drug, food or household use.
Product	SODIUM HEXANITROCOBALT	
Synonyms	Potassium Reagent #1	
Section 2	Hazards identification	
Pičtograms Target orga GHS Classi Oxidizing so Respiratory Skin sensitiz Eye irritatior STOT-SE (C Carcinogeni H317: May (H319: Caus H334: May (H335: May (fication: blid (Category 2) sensitization (Category 1) zation (Category 1) h (Category 2A)	 Precautionary statement: P203: Obtain, read and follow all safety instructions before use. P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P201: Avoid breathing dust. P264: Wash hands thoroughly after handling. P271: Use only outdoors or in a well-ventilated area. P272: Contaminated work clothing should not be allowed out of the workplace. P280: Wear protective gloves/protective clothing/eye protection/face protection. P281: In case of inadequate ventilation, wear respiratory protection. P302+P352: IF ON SKIN: Wash with plenty of water and soap. P303+P317: If skin irritation or rash occurs: Get medical help. P304+P340: IF INHALED: remove person to fresh air and keep comfortable for breathing. P342+P316: If experiencing respiratory symptoms: Get emergency medical help immediately. P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P378: IF exposed or concerned: Get medical advice. P362+P364: Take off contaminated clothing and wash it before reuse. P370+P378: In case of fire: Use water to extinguish. P403+P233: Store in a well-ventilated place. Keep container tightly closed. P405: Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

Section 3 Composition / information on ingredients						
Chemical Name	CAS #	%	EINECS			
Sodium hexanitrocobalt	13600-98-1	100%	237-077-7			
Section 4 First aid measures						

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Use water. Do not use dry chemicals or foams. CO₂ or Halon[®] may provide limited control.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. In contact with easily oxidizable substances it may react rapidly enough to cause ignition, violent combustion or explosion.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Remove all sources of ignition. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
	Sodium hexanitrocobalt	TWA: 0.02 mg/m ³ (A3)	none established	none established		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

Section 9 Physical and chemical pro	operties	
Appearance: Solid. yellow powder Odor: None listed Odor threshold: Data not available. pH: Data not available. Melting / Freezing point: 220°C (428°F) Boiling point: Data not available Flash point: Data not available	Evaporation rate (Butyl acetate = 1): Data not available Flammability (solid/gas): Data not available. Explosion limits: Lower / Upper: Data not available Vapor pressure (mm Hg): Data not available Vapor density (Air = 1): Data not available Relative density (Specific gravity): 2.6 Solubility(ies): Soluble in water.	Partition coefficient: Data not available Auto-ignition temperature: Data not available Decomposition temperature: Data not available. Viscosity: Data not available. Molecular formula: CoN ₆ Na ₃ O ₁₂ Molecular weight: 403.94
Section 10 Stability and reactivity		

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatible materials: Organic material. Combustible material. Hydrocarbons. Strong acids, bases oxidizers.

Hazardous decomposition products: No data available.

Section 11	Toxicological information						
Acute toxicity: Data not available Skin corrosion/irritation: Data not available Serious eye damage/irritation: Data not available Respiratory or skin sensitization: Data not available Germ cell mutagenicity: Data not available Carcinogenity: Data not available NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. IARC classified: Group 2B: Possibly carcinogenic to humans. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity: Data not available STOT-single exposure: Data not available STOT-repeated exposure: Data not available StoT-repeated exposure: Data not available Aspiration hazard: Data not available Skin: Contact causes irritation or alergic reaction. Eyes: Contact causes irritation. Skin: Contact causes irritation. Signs and symptoms of sposure: The substance is irritating to skin, eyes and respiratory tract. Repeated or prolonged inhalation may cause asthma. This substance is possibly carcinogenic to humans. Exercise appropriate procedures to minimize potential hazards. Additional information: RTECS #: None available							
Toxicity to algae:	o data available a and other aquatic invertebrates: No data available egradability: No data available	Bioaccumu	ble lative potential: No vB assessment: No				
	ects: An environmental hazard canno	ot be excluded	in the event of unpro-	fessional handling o	or disposal.		
regulations may b Section 14 UN/NA number:		ance with all ne: Oxidizing	g solid, , n.o.s., (Sodiu	eral regulations o um hexanitrocobalta	r contract with ate)	a licensed che	mical disposal agency.
Hazard class: 5.1 Packing group: II Reportable Quantity: No Marine pollutant: No Exceptions: Limited quantity equal to or less than 1 Kg 2020 ERG Guide # 140 Marine pollutant: No						iarine pollutant: No	
Section 15	Regulatory information						
	ed to be listed if the CAS number for the a	-					
Compor		TSCA Not Listed	CERLCA (RQ)	RCRA code	DSL Not listed	NDSL Not listed	CA Prop 65 This product does not contain
Sodium hexanitroco	DDAIT	Not Listed	Not listed	Not listed	Not listed	Not listed	any chemicals known to the State of California to cause cancer or reproductive toxicity.
Section 16	Other information						
	ined herein is furnished without warranty of suitability and completeness of information						

dent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook Form 06/2015

Identification Section 1 Page E1 of E2 INNOVATING SCIENCE® by Aldon Corporation 221 Rochester Street **CHEMTREC 24 Hour Emergency** 221 Rochester Street Avon, NY 14414-9409 (585) 226-6177 Phone Number (800) 424-9300 "Cutting edge science for the classroom" For laboratory and industrial use only. Not for drug, food or household use. POTASSIUM REAGENT Product Potassium Reagent #2 Synonyms Section 2 Hazards identification Signal word: DANGER **Precautionary statement:** Pictograms: GHS02 / GHS06 / GHS08 P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking Target organs: Eyes, Central nervous system, Liver, Kidneys. P233+P235: Keep container tightly closed. Keep cool. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/lighting equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge P260: Do not breathe mist/vapours/spray. **GHS Classification:** P264: Wash hands thoroughly after handling. Flammable liquid (Category 2) P270: Do not eat, drink or smoke when using this product. Acute toxicity, oral (Category 3) P271: Use only outdoors or in a well-ventilated area. Acute toxicity, dermal (Category 3) P280: Wear protective gloves/protective clothing/eye protection/face protection. Acute toxicity, inhalation (Category 3) P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor. Eye irritation (Category 2B) P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove STOT-SE (Category 2) contact lenses, if present and easy to do. Continue rinsing. STOT-SE (Category 3) P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. GHS Label information: Hazard statement: P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for H225: Highly flammable liquid and vapour. breathing. H301: Toxic if swallowed. P308+P311: IF exposed or concerned: Call a POISON CENTER or doctor. H311: Toxic in contact with skin. P337+P313: If eye irritation persists: Get medical attention. H319: Causes serious eye irritation. P361+P364: Take off immediately all contaminated clothing and wash it before reuse. H331: Toxic if inhaled. P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide or water H336: May cause drowsiness or dizziness. spray to extinguish. H371: May cause damage to organs. P403+P405: Store in a well-ventilated place. Store locked up. P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations. Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known Physical hazards not otherwise classified (PHNOC) - Not Known

CAS # 64-17-5	% 80.75 - 81.51%	EINECS	
	80 75 - 81 51%	000 570 0	
	00.70 01.0170	200-578-6	
67-63-0	8.55%	200-661-7	
7732-18-5	5.00%	231-791-2	
67-56-1	3.80 - 4.08%	200-659-6	
108-10-1	0.85 - 0.95%	203-550-1	
1310-73-2	0.083%	215-185-5	

Section 4 First aid measures

INGESTION: TOXIC IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: TOXIC IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES SERIOUS EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN ABSORPTION: TOXIC IN CONTACT WITH SKIN. CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire fighting measures

Suitable Extinguishing Media: Carbon dioxide, dry chemical, dry sand, alcohol foam.

Protective Actions for Fire-fighters: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

Section 6 Accidental release measures

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways

Containment and Cleanup: Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

Precautions for Safe Handling: Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

Conditions for Safe Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

Section 8	Exposure controls / personal protection					
Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)		
Exposure Limits.	Ethanol	STEL: 1000 ppm / 1880 mg/m ³ (A3)	TWA: 1000 ppm / 1900 mg/m ³	TWA: 1000 ppm / 1900 mg/m ³		

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHAapproved respirator.

approved respirator.							
Section 9	Physical and chemical pr	operties					
Appearance: Clear, c Odor: Mild characteris Odor threshold: Data pH: Data not available Melting / Freezing po Boiling point: 74-80° Flash point: 5°C (41°	stic odor. a not available. e. int: -114°C (-173°F)* C (165.2-176°F)*	Flammability (s Explosion limit Vapor pressure Vapor density Relative density	te (Butyl acetate = 1) solid/gas): Data not a ts: Lower / Upper: 4 e (mm Hg): Ca 50 @ (Air = 1): Ca 1.5* Specific gravity): 0.791 Soluble in water.	available. .0%(V) / 20.0%(V)* 20°C*	Auto-igniti Decompos Viscosity: Molecular	ion temperature:	re: Data not available. le.
Section 10	Stability and reactivity						[]
Chemical stability: S Conditions to avoid:	table Excessive temperatures, hea		us polymerization:				
	Is: Strong oxidizers, inorgani	/ I / I		5			
Hazardous decompo	sition products: Oxides of c	arbon.					
Section 11	Toxicological information	I					
	rat LD50: 7060 mg/kg ; Inhala . ion: Skin - rabbit - Causes se			ol]			
Respiratory or skin s Germ cell mutagenic Carcinogenity: Data NTP: No component of IARC classified: Group OSHA: No component CA Prop 65: WARN cancer and birth defec Reproductive toxicit STOT-single exposu STOT-repeated expo Aspiration hazard: D Potential health effec Inhalation: Inhalation Ingestion: Ingestion c Skin: Contact with ski Eyes: Contact with ey Signs and symptoms Additional informatio	f this product present at levels o 3: Not classifiable as to its ca o 4: this product present at level IING! : This product present at level IING! : This product ven exposi- its or other reproductive harm. y: Data not available re: The substance or mixture sure: Data not available obta not available cts: may cause dizziness, drowsiness, n causes irritation defatting or res may cause blindness. s of exposure: See Potential on: RTECS #: KQ6300000 [E	ble s greater than or e arcinogenicity to h els greater than or se you to chemica is classified as sp less, nausea, vom decreased reaction n prolonged contac health effects abo	iqual to 0.1% is identif umans. [Isopropanol] equal to 0.1% is iden ls including Methanol ecific target organ tox iting, inability to conce n, euphoria, nausea, o t.	tified as a known or an tified as a carcinoge and Methyl isobutyl icant, single exposu entrate and irritation	n or potential of ketone, which re, category 3 of the throat.	carcinogen by OS are known to the with narcotic effe	State of California to cause
Section 12	Ecological information						
Toxicity to daphnia a Toxicity to algae: Chi Persistence and deg Mobility in soil: No d	orhynchus mykiss (fish, fresh o nd other aquatic invertebrat orella pyrenoidosa (Algae), EC radability: No data available ata available s: An environmental hazard c	es: Daphnia mag C50 = 9,310 mg/l/g Bioaccumu PBT and vl	na (Crustacia), EC50 growth rate [Ethanol, a Ilative potential: No PvB assessment: No	= 10,800 mg/l/24 ho ibsolute] data available o data available		9.8% pure]	
Section 13	Disposal considerations						
These disposal guid regulations may be	elines are intended for the different. Dispose of in acc	disposal of cata ordance with all	og-size quantities o local, state and fed	nly. Federal regul eral regulations or	ations may a contract with	pply to empty c a licensed che	ontainer. State and/or loc mical disposal agency.
Section 14	Transport information						- /
UN/NA number: เ	JN1170 Shipping	name: Ethano	bl				
Hazard class: 3	Packing g	group: II		ole Quantity: 5,0	00 lbs (2270) kg) Ma	rine pollutant: No
Exceptions: Limit	ed quantity equal to or les	s than 1 L	2020 ER	G Guide # 127			
Section 15	Regulatory information						
	to be listed if the CAS number for						
Componer	ıt	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Ethanol Mothanol		Listed	Not listed	D001	Listed	Not listed	WARNING -Cancer ar Reproductive Harm

Isopropanol Sodium hydroxide Section 16 Other information

Methanol

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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

5.000 lbs.

Not listed

1,000 lbs (454 kg)

Listed

l isted

Listed

U154

Not listed

D002

Listed

I isted

Listed

Not listed

Not listed

Not listed

Reproductive Harm

www.P65Warnings.ca.gov.